Amendments to the Claims

1. (Previously presented) An electrical modular power node comprising:

   a. a power bus backplane containing a plurality of bus bars at least some of which are connectable to at least one power source, each bus bar having a plurality of terminals at regular intervals along the bus bar, each terminal being in a standard position in a pattern with terminals from the other bus bars and al terminal patterns being in a standard orientation on the backplane; and

   b. a plurality of functional modules, each housing circuitry having at least one connector for a connection to at least one terminal on a bus bar and including bounding faces conforming to bounding faces of adjacent modules when also connected to the backplane, said modules providing geometrical packages for enclosing and supporting functional components, circuitry and connectors for electrically connecting the functional components and circuitry to the appropriate terminals, the connectors facing the power bus backplane being positioned to connect with specific terminals within each pattern on the bus bars such that each pattern of terminals on the backplane will accept minimum dimension modules at each terminal position without interfering with other module at other terminal positions.

2. (Original) The electrical modular power node of claim 35 in which connections between each functional module and selected terminals of the bus bars on the

backplane contribute to support of said modules in position relative to the power backplane and other modules.

3. (Original) The electrical modular power node of claim 2 in which the functional modules are self-connecting to the backplane, such that when a functional module is properly positioned and oriented relative to the backplane and pressed towards the backplane, the terminals and connectors self-engage and make electrical contact.

4. (Original) The electrical modular power node of claim 35 in which parallel sets of bus bars are provided in the backplane and the functional modules are shaped and sized so that faces of the functional modules conform to bounding faces of adjacent functional modules.

5. (Previously presented) The electrical modular power node of claim 4 wherein some modules are not to be electrically connected to given bus bars and connectors are provided on the modules in proper position for such connection which resemble those providing electrical connection, but in those positions only function to provide additional mechanical support for the module.

6. (Original) The power modular power node of claim 4 in which connections between the connections between the connectors supported on each functional module and selected terminals of the bus bars of the backplane support said functional modules in position relative to the power backplane and relative to other functional modules.

7. (Previously presented) The electrical modular power node of claim 5 in which the connectors on the functional modules are self-connecting to terminals on the

backplane such that when a functional module is properly positioned and oriented relative to the backplane and pressed toward the backplane, the terminals and connectors self-engage providing mechanical support for the module and making electrical connection where intended.

8. (Previously presented) The electrical modular power node of claim 4 in which at leas some of the bus bars in the same relative positions within the parallel sets of bus bars are electrically connected together.

9. (Original) The electrical modular power node of claim 8 in which at least one set of interconnected bars is connected to a power source.

10. (Previously presented) The electrical modular power node of claim 4 in which at least one set of bus bars of the parallel sets of bus bars are not electrically connected together and not connected to an external power source but at least one set of bus bars is connectable to an external power source.

11. (Previously presented) The electrical modular power node of claim 3 in which at each minimum size functional module position on the backplane there is a terminal for each bus bar in a standard pattern of configuration and orientation whereby connectors on modules in positions opposite selected terminals self-engage those terminals in the power bus backplane and contribute to support of the functional module and terminals which are not opposed by connectors are accommodated by the module configuration to permit interconnection of those terminals and connectors which are opposed to one another.

12. (Original) The electrical modular power node of claim 3 in which at each minimum size functional module position on the backplane there is a terminal for

each bus bar in a standard pattern of configuration and orientation whereby terminals in positions opposite selected connectors engage those connectors in the power module to self-engage and contribute to support of the functional module and connectors which are not opposed by connectors are accommodated by the module configuration to permit interconnection of those terminals and connectors which are opposed to one another.

13. (Previously presented) The electrical modular power node of claim 3 in which those connectors opposite terminals which are not to be connected electrically in the functional module are not electrically connected in the module but provide mechanical support.

14. (Previously presented) The electrical modular power node of claim 11 in which the terminals on the bus bars of the backplane are a post and the connectors on the functional modules are spring-loaded gripping elements which yield to a post but continue to engage that post as a module is moved toward the backplane.

15. (Original) The electrical modular power node of claim 10 in which the terminals on the bus bars of the backplane are spring-loaded gripping elements and the connectors on the functional modules are a simple post, whereby the gripping elements yield to a post but continue to engage that post as the functional module is moved toward the backplane.

16. (Previously presented) An electrical modular power node of claim 3 in which the backplane of the power module is marked to indicate proper positioning of functional modules of minimum size whereby functional modules placed in the positions indicated but spaced away from the backplane may be guided toward the

indicated backplane positions for self-engaging connection of the connectors to the terminals.

17. (Original) An electrical modular power node of claim 4 in which the backplane is marked to indicate proper positioning of functional modules of minimum size whereby functional modules placed in the positions indicated but spaced away from the backplane may be moved towards the backplane for self-engaging connection of the connectors to the terminals.

18. (Original) The electrical modular power node of claim 4 in which the backplane is marked to indicate proper positioning of functional modules of minimum size whereby functional modules placed in the positions indicated but spaced away from the backplane may be moved toward the backplane for self-engaging connections of the connectors to the terminals, wherein functional modules having dimensions which have a dimension an integral multiple of the minimum size may also be accommodated by providing at least one set of connectors on the functional module in the pattern orientation corresponding to at least part of one pattern and orientation of terminals on the backplane and wherein other terminals at other positions on the backplane are accommodated by design of the module.

19. (Original) The electrical modular power node of claim 18 in which all positions on the larger than minimum size functional module which correspond to the terminal positions on the backplane are provided with electrical connectors or non-electrical connectors which engage all of the terminals on the backplane opposite the larger module and, therefore, further contribute to its support.

20. (Original) The electrical power node of claim 4 in which at least some functional modules are directly electrically interconnected through connections on opposed functional modules faces other than those facing the backplane.

21. (Original) The electrical power node of claim 9 in which at least some functional modules are directly electrically interconnected through connections on opposed module faces other than those facing the backplane.

22. (Original) The electrical power node of claim 21 in which connectors are supported on a sidewall face of a functional module and terminals positioned to mate with the connectors are positioned on an opposed sidewall face of another functional module.

23. (Original) The electrical power node of claim 22 in which the respective connectors are self-connecting and in predetermined patterns, orientation and position on the sidewalls so that when the sidewalls are moved together with the modules in predetermined position the connections self-connect, electrically connecting active electrical connections and their respective circuitry together.

24. (Original) The electrical power node of claim 21 which the respective connectors are supported on opposed faces parallel to the backplane of functional modules enabling the functional modules to be stacked away from the backplane so that the outer module is supported on the inner module at least in part by engagement of their respective electrical terminals and connectors.

25. (Previously presented) A power node control center of modular construction for use in an electrical power distribution system comprising:

a. a power bus backplane having a plurality of substantially co-planar bus bars for carrying electrical power;

b. a plurality of functional modules each contained in a parallelpiped-shaped housing adapted for complementally contacting fitting with other ones of said functional modules with said backplane, at least some of said functional modules comprising at least one of rectifying means, switching means, voltage conversion means, voltage regulation means, pulse and other wave form generation means, voltage transformation means and/or power sensing and limiting means;

c. a control module contained in a parallelepiped-shaped housing adapted for complementally contacting fitting with at least one of said functional modules and with said backplane, comprising:

i. programmable microprocessor means for controlling operation of at least one of said functional modules according to preselected instructions and operating and performance criteria including at least one of voltage and current limits, voltage polarity, surge criteria, temperature limits, humidity limits, shock limits and alternating current phase parameters; and

d. plug-compatible means on said backplane and at least one of said functional modules for electrically connecting a selected functional module to said bus bars of said backplane.

26. (Previously presented) A power bus backplane comprising:

a. at least two stacked bus conductors arranged generally parallel to one another with one over the other;

b. rigidly supported terminal means connected to each of the bus conductors in a common pattern repeated on the backplane at regular intervals representing the minimum dimensions of the standard module and positioned to cooperate with connectors on cooperating modules; and

c. a resinous material cast about the conductors and supporting the connections and rigid terminals thereby.

27. (Previously presented) The bus backplane of claim 26 in which cooperating terminals on the module and on the bus plane include one terminal in each pair as a self-engaging connector so that the module and backplane self-connect upon having their terminals and connectors aligned and pressed together.

28. (Original) The power bus backplane of claim 27 in which the bus conductors are in columns having similar form, array, terminal patterns and positions in side by side arrangement so that cooperating modules may be arranged in matrix array as well as columns.

29. (Previously presented) The power bus backplane of claim 28 in which means is provided to connect power to the bus connectors and to cross-connect bus bars intended to carry the same kind of power and at the same potential.

30. (Previously presented) The power bus backplane or claim 27 in which the bus conductors are in a stacked array with terminals for the bus conductor on the bottom passing through holes in each bus conductor above the bottom with

insulation between the bus conductors and around the terminals passing through holes in other conductors.

31. (Previously presented) The power bus backplane of claim 27 in which at least two other conductors pass through holes in all stacked bus conductors in the backplane, are insulated therefrom and provided with rigid terminals on both sides of the backplane.

32. (Previously presented) The bus backplane of claim 31 in which the bus conductors which are stacked are repeated side by side so that there are columns of stacked bus conductors with regular columns of terminals for receiving modules at regular intervals along each column.

33. (Previously presented) The backplane of claim 32 in which the bus conductors are sheets essentially the dimensions of the backplane stacked one on top of another, each with a terminal extending through holes in the other conductor at regular intervals both in columns and rows.

34. (Original) The backplane of claim 33 in which at each terminal pattern there is at least one conductor extending through both bus conductors in holes larger than the conductors in holes larger than the conductor passing through and insulated therefrom and provided with terminals on both sides of the bus plane.

35. (Previously presented) The electrical modular power node of claim 1 in which the terminals are so rigidly supported on the backplane and the connectors so firmly supported on the module housings that when the connector and terminals are engaged they provide mechanical support for the module.

36. (Previously presented) The power bus backplane of claim 30, in which there are two bus conductors and the terminals on the conductor on the bottom pass through holes in the conductor on the top.

37. (Previously presented) The power bus backplane of claim 30, in which the bus conductors placed in stacked array include at least three such conductors with the terminals for the bus conductor on the bottom passing through holes in each of the two bus conductors above it, and the bus conductor at the next layer having terminals which pass through holes in the top bus conductor.

38. (Previously presented) The power bus backplane of claim 30, in which in addition to power bus conductors there is a control bus conductor having a terminal on the control bus conductor which passes through holes in any of the power conductors placed above it and terminals on any power conductors below the control conductor bus pass through holes in it.

39. (Previously presented) The power bus backplane of claim 29, in which cross connected bus bars are at the same level in the backplane and cross-connected bars of a related group of bars at different potential are at different parallel levels of the backplane.

40. (Previously presented) The power bus backplane of claim 29 in which bus bars are in the same plane with bus bars of different potential and cross connectors are directed around bus bars of different potential using other planes.

41. (Previously presented) A power node comprising, in combination with the power bus backplane of claim 26, a plurality of cooperating functional modules which have circuitry within the module and connect to terminals on load conductors

extending through the backplane to terminals on the opposite side of the backplane to terminals on the opposite side of the backplane from the module supporting side, which in turn provide connection to a power source, another node or a load.

42. (Previously presented) The power bus backplane and module combination of claim 41, in which the modules provide flat surfaces similar to surfaces on adjacent modules and by connection to terminals on the backplane said flat surfaces are positioned in contact with one another and lend support to one another by their mutual contact.

43. (Previously presented) The power bus backplane and module combination of claim 41, in which the at least two bus conductors are co-extensive for practical purposes with the backplane, each array of terminals is the same and repeated at positions in a matrix that permit use of minimum dimension modules which contact and help support adjacent modules and provide the same power to all of the modules.

44. (Previously presented) The power bus backplane and module combination of claim 41, in which the modules are all rectangular solids with the connectors in a standard array along a narrow edge corresponding to terminal arrays on the backplane.

45. (Previously presented) The power bus backplane and module combination of claim 44, in which the pattern of terminals on the modules is linear and extends in the direction of the length of the edge along which the pattern is arranged.

46. (Previously presented) A module for use in connection with a power bus backplane node comprising circuitry and at least one component for modifying power passing to the module and connected to terminals affixed to and capable of supporting the module to some extent through their electrical and mechanical connection to terminals on the backplane.

47. (Previously presented) The module of claim 46, in which at least two terminals are devoted to power input and two terminals to power output as to a load outside of the module backplane node.

48. (Previously presented) The power bus backplane of claim 31, in which the insulation and support of the at least two other conductors passing through the backplane without conductive connection to the conductors in the backplane are rigidly supported and provided with terminals on the module side of the backplane which are of the same type employed for the terminals for the respective busses and terminals the other side of the backplane are also rigidly supported so as to be suitable for connection to conductors to a load.

49. (Previously presented) The power bus backplane of claim 30, in which further bus conductor in the stack in a control bus capable of carrying multiple signals as in a computer bus and provided with a terminal suited to the type of signals supplied to it and removed from it.

50. (Previously presented) The bus backplane of claim 32 in which the backplane is arranged to provide for a single configuration of terminal pattern and that pattern is repeated at each modular position in the matrix.

51. (Previously presented) The bus backplane of claim 50 in which the functional modules used with the backplane have an identical rectangular solid external appearance with connectors cooperating with the backplane terminals for self-cooperating with the backplane terminals for self-engagement arranged along the length of one narrow edge of the modules corresponding to positioning of the terminals on the backplane so that flat surfaces of the modules immediately adjacent to one another contact and so that their top, bottom and side edges adjacent other module positions may be contacted in the matrix as modules are added or removed from the backplane.

52. (Previously presented) In an electrical modular power node including a power bus backplane containing a plurality of bus bars at least some of which are connectable to at least one power source, each bus bar having terminals spaced along the bus bar, each terminal being in a predetermined position in a pattern, and a plurality of functional modules, each housing at least one functional component and circuitry having at least one connector for connection to at least one terminal on a bus bar to provide output required by a load, the improvement characterized by

a. respective ones of the bus bars running in a first direction and being adapted to carry differing phases and/or polarities of power with plural ones of said bars carrying individual phases and/or polarities being connected together by tie bars extending generally transversely to said first direction, with the bus bars and tie bars of respective phases/polarities being generally coplanar and perpendicularly spaced from one another.

53. (Previously presented) The electrical modular power node of claim 52 in which connections between functional modules and terminals of the bus bars results in vertical and lateral support of other modules in facing position relative to the power backplane and other modules.

54. (Previously presented) The electrical modular power node of claim 53 in which the functional modules are self-connecting to the backplane, such that when a functional module is properly positioned and oriented relative to the backplane and pressed towards the backplane, the terminals and connectors mechanically self-engage and make electrical contact and the backplane vertically supports the functional module via the connection.

55. (Previously presented) The electrical modular power node of claim 52 in which parallel sets of bus bars are provided in the backplane and the functional modules are shaped and sized so that exterior surfaces of the functional modules facingly conform to bounding exterior surfaces of adjacent functional modules.

56. (Previously presented) The electrical modular power node of claim 55 having module positions where some terminals on the bus bar not to be electrically connected to a given functional module are provided which resemble those providing electrical connection and in those positions provide additional mechanical support.

57. (Previously presented) The electrical modular power node of claim 55 in which connectors supported on each functional module and selected terminals of the bus bars of the backplane support said functional modules in position relative to the power backplane and relative to other functional modules.

58. (Previously presented) The electrical modular power node of claim 56 in which pin connectors on the functional modules are self-connecting to tulip terminals on the backplane such that when a functional module is properly positioned and oriented relative to the backplane and pressed toward the backplane, the terminals and connectors self-engage making electrical contact.

59. (Previously presented) The electrical modular power node of claim 55 in which at least some bars in the same relative positions of the parallel sets of bus bars are electrically connected together.

60. (Previously presented) The electrical modular power node of claim 59 in which at least one set of interconnected bars is connected to a power source.

61. (Previously presented) The electrical modular power node of claim 55 in which at least some bus bars in the same relative positions of the parallel sets of bus bars are not electrically connected together and not connected to an external power source.

62. (Previously presented) The electrical modular power node of claim 54 in which at each minimum size functional module position on the backplane there is a terminal for each bus bar in a standard pattern of configuration and orientation whereby connectors in positions opposite selected terminals engaging those terminals contribute to support of the functional module and terminals which are not opposed by connectors are accommodated by the module configuration to permit interconnection of those terminals and connectors which are opposed to one another.

63. (Previously presented) The electrical modular power node of claim 54 in which at each minimum size functional module position on the backplane there is a terminal for each bus bar in a standard pattern of configuration and orientation whereby terminals in positions opposite selected connectors self-engage and contribute to support of the functional module and connectors which are not opposed by connectors are accommodated by the module configuration to permit interconnection of those terminals by the module configuration to permit interconnection of those terminals and connectors which are opposed to one another.

64. (Previously presented) The electric modular power node of claim 54 in which those positions opposite terminals which are not to be connected electrically to a functional module are opposed by connectors not electrically connected in the module providing mechanical support.

65. (Previously presented) The electrical modular power node of claim 61 in which the terminals on the bus bars of the backplane are spring-loaded gripping elements and the connectors on the functional modules are a simple post, whereby the gripping elements yield to a post but continue to engage that post as the functional module is moved toward the backplane.

66. (Previously presented) An electrical modular power node of claim 54 in which the backplane is marked to indicate proper positioning of functional modules of minimum size whereby functional modules placed in the positions indicated by spaced away from the backplane may be moved toward the backplane for self-engaging connection of the connectors to the terminals.

67. (Previously presented) An electrical modular power node of claim 55 in which the backplane is marked to indicate proper positioning of functional modules of minimum size whereby functional modules placed in the positions indicated but spaced away from the backplane may be moved towards the backplane for self-engaging connection of the connectors to the terminals.

68. (Previously presented) The electrical modular power node of claim 55 in which the backplane is marked to indicate proper positioning of functional modules of minimum size whereby functional modules placed in the positions indicated but spaced away from the backplane may be moved toward the backplane for self-engaging connection of the connectors to the terminals, wherein functional modules having a dimension which is an integral multiple of the minimum size may also be accommodated by providing at least one set of connectors on the functional module in a pattern and orientation corresponding to a least part of one pattern and orientation of terminals on the backplane and wherein other terminals at other positions on the backplane are accommodated by design of the module.

69. (Previously presented) The electrical modular power node of claim 18 in which all positions on the larger than minimum size functional module which correspond to the terminal positions on the backplane are provided with electrical connectors or non-electrical connectors which engage all of the terminals on the backplane opposite the larger module and contribute to its support.

70. (Previously presented) The electrical power node of claim 55 in which at least some functional modules are directly electrically interconnected through

connections on opposed functional module faces other than those facing the backplane.

71. (Previously presented) The electrical power node of claim 60 in which at least some functional modules are directly electrically interconnected through connections on opposed module faces other than those facing the backplane.

72. (Previously presented) The electrical power node of claim 21 in which connectors are supported on a sidewall face of a functional module and terminals positioned to mate with the connectors are positioned on an opposed sidewall face of another functional module.

73. (Previously presented) The electrical power node of claim 22 in which the respective connectors are self-connecting and in predetermined patterns, orientation and position on the sidewalls so that when the sidewalls are moved together with the modules in predetermined position the connections self-connect, electrically connecting active electrical connections and their respective circuitry together.

74. (Previously presented) The electrical power node of claim 21 in which the respective connectors are supported on opposed faces parallel to the backplane of functional modules enabling the functional modules to be stacked away from the backplane so that an outer module is supported on an inner module at least in part of engagement of their respective electrical terminals and connectors.

75. (Previously presented) In a power node control center of modular construction for use in an electrical power distribution system including a power bus backplane having a plurality of parallel and substantially co-planar bus bars for carrying

electrical power, a plurality of functional modules contained in parallelpiped-shaped housings adapted for complementally contracting fitting with other ones of said functional modules and with said backplane, at least some of said functional modules comprising at least one of rectifying means, switching means, voltage conversion means, voltage regulation means, pulse and other wave form generation means, voltage transformation means and/or power sensing and limiting means, a control module contained in a parallelpiped-shaped housing adapted for complementally contacting fitting with at least one of said functional modules and with said backplane and having programmable microprocessor means for controlling operation of at least one of said functional modules according to preselected instructions and operating and performance criteria including at least one of voltage and current limits, voltage polarity, surge criteria, temperature limits, humidity limits, shock limits and alternating current phase parameters, and plug-compatible means on said backplane and at least one of said functional modules for electrically connecting a selected functional module to said bus bars of said backplane; the improvement characterized by:

a. outer surfaces of said functional and control modules facing away from or perpendicular to said backplane being planar and smooth;

b. said bus bars being grouped in sets, each set embracing at least two bus bars and being adapted to carry power having phase and/or polarity differing from power carried by other sets, said bars of each set being connected together and generally co-planar with one another;

c. said sets being transversely spaced one from another;

d. said plug compatible means including a plurality of spring-loaded receptacles connected to respective sets of said bus bars and being adapted to receive connector pins extending from functional module surfaces facing said backplane.

76. (Previously presented) In a power bus backplane including at least two bus conductors running in a first direction and being adapted to carry power of differing phase or polarity, rigid terminals connected to each of the bus connectors and resinous material cast about the bus conductors to support the bus conductors and the rigid terminals; the improvements characterized by:

a. pluralities of such bus conductors being grouped in a plurality of sets;

b. bus conductors of each set being connected together by ties extending transversely to the first direction, the ties being at least partially embedded with the case resinous material;

c. bus conductors at each set being laterally spaced from one another in a second direction transversely to the first direction;

d. the sets being transversely spaced one from another in a third direction perpendicular to the first and second directions so that the bus conductors and the ties of respective sets carrying respective individual phases and/or polarities are co-planar and perpendicularly spaced from one another.

77. (Previously presented) The bus backplane of claim 76 in which connector pins on a module adapted to fit on the backplane and the receptacles on the backplane include at least one pair fitting sufficiently snugly to act as a self-engaging

connector so that the module and backplane fit together upon being positioned and pressed together.

78. (Previously presented) The power bus backplane of claim 77 in which the bus conductors are in a stacked array and terminals for a bus conductor on the bottom pass through a clearance hole in the bus conductor on the top with an insulating gap therebetween.

79. (Previously presented) The bus plane of claim 78 in which the bus conductors are repeatedly in a side-by-side orientation resulting in columns of stacked bus conductors with regular columns of terminals for receiving modules at regular intervals along the column.

80. (Previously presented) A modular electrical power node comprising:

a. a plurality of functional modules each contained in a housing adapted for complemental joining with other ones of said functional modules and with a power bus backplane, at least some of said functional modules comprising at least one of rectifying means, voltage regulation means, pulse and other wave form generation means, voltage transformation means and/or power sensing and limiting means, at least of some of said functional modules further comprising:

i. circuitry and at least one component for modifying power passing between the module and the backplane, connecting to terminals affixed to and capable of supporting the module to some extent through electrical and mechanical plug-compatible connection to terminals on said backplane;

b. a control module contained in a housing adapted for complemental joining with at least one of said functional modules and with said backplane, comprising:

i. programmable microprocessor means for controlling operation of at least one of said functional modules according to preselected instructions and operating and performance criteria including at least one of voltage and current limits, voltage polarity, surge criteria, temperature limits, humidity limits, shock limits and alternating current phase parameters;

c. the power bus backplane having a plurality of bus bars, at least some of which are connectable to at least one power source, each bus bar having terminals spaced along the bus bar in predetermined positions in a pattern, with respective ones of the bus bars running in a first direction and being adapted to carry differing phases and/or polarities of power with plural ones of said bars carrying individual phases and/or polarities being connected together by tie bars extending generally transversely to said first direction, with the bus bars and tie bars of respective phases/polarities being generally coplanar and perpendicularly spaced from one another with said plural connected bus bars being grouped in sets, each set embracing at least two bus bars and being adapted to carry power having phase and/or polarity differing from power carried by other sets, said sets being transversely spaced one from another, with bus connectors of each set being connected together by ties extending transversely to the first

direction, bus conductors of each set being laterally spaced from one another in a second direction transversely to said first direction, the sets being transversely spaced one from another in a third direction perpendicular to the first and second direction so that the bus conductors and the ties of respective sets carrying respective individual phases and/or polarities are co-planar and perpendicularly spaced from one another; and

d. plug-compatible means on said backplane and at least one of said modules for electrically connecting said module to at least some of said bus bars of said backplane.

81. (Previously presented) The node of claim 80 wherein said functional module housings are parallelepiped-shaped.

82. (Previously presented) The node of claim 80 wherein said control module housing is parallelepiped-shaped.

83. (Previously presented) The node of claim 81 wherein said control module housing is parallelepiped-shaped.

84. (Previously presented) The node of claim 80 wherein said functional module housings are adapted for complementally contacting other ones of said functional modules.

85. (Previously presented) The node of claim 80 wherein said functional module housings are adapted for complementally contacting said backplane.

86. (Previously presented) The node of claim 84 wherein said functional module housings are adapted for complementally contacting said backplane.

87. (Previously presented) The node of claim 80 wherein said control module housing is adapted for complementally contacting housings of said functional modules.

88. (Previously presented) The node of claim 80 wherein said control module housing is adapted for complementally contacting said backplane.

89. (Previously presented) The node of claim 87 wherein said control module housing is adapted for complementally contacting said backplane.

90. (Previously presented) The node of claim 80 wherein said plug-compatible means include a plurality of spring-loaded receptacles connected to respective sets of said bus bars and are adapted to receive connector pins extending from functional module surfaces facing said backplane.

91. (Previously presented) The node of claim 80 further comprising resinous material cast about the bus conductors to support the bus conductors and the associated backplane terminals.

92. (Previously presented) The node of claim 80 in which the bus conductors are in a stacked array and terminals for a bus conductor on the bottom pass through a clearance hole in the bus conductor on the top with an insulating gap therebetween.

93. (Previously presented) The node of claim 80 in which the bus conductors are repeatedly in a side-by-side orientation resulting in columns of stacked bus conductors with regular columns of terminals for receiving modules at regular intervals along the column.